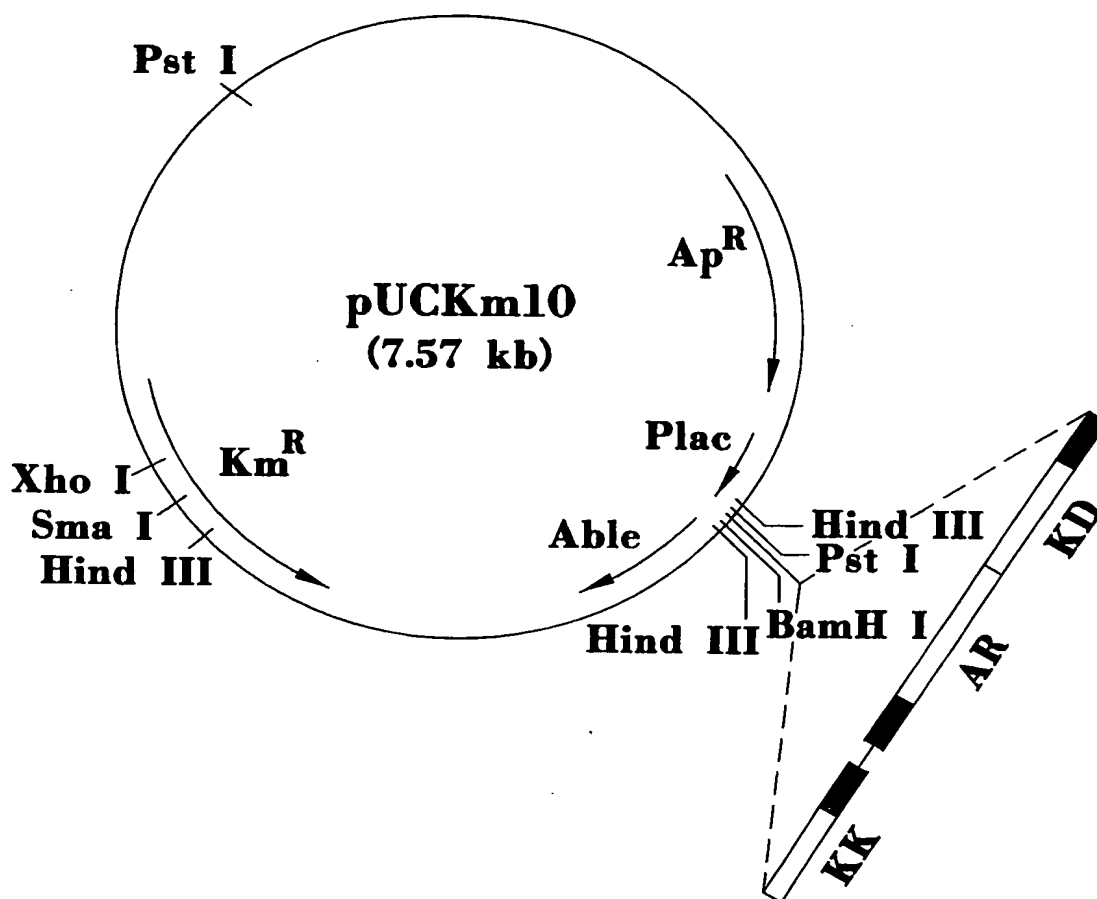


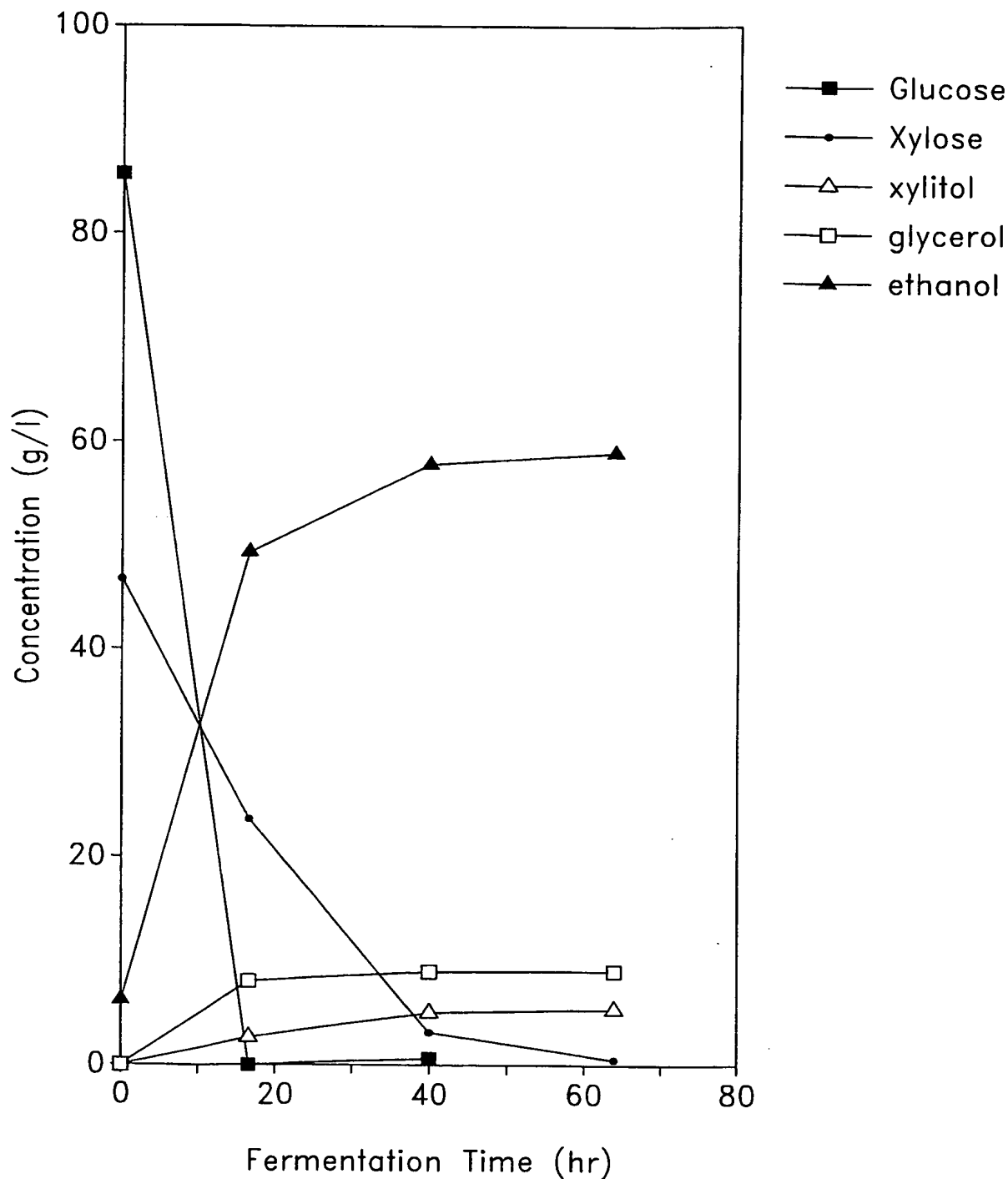
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pLNH31, pLNH32, pLNH33, or pLNH 34

Fig. 1

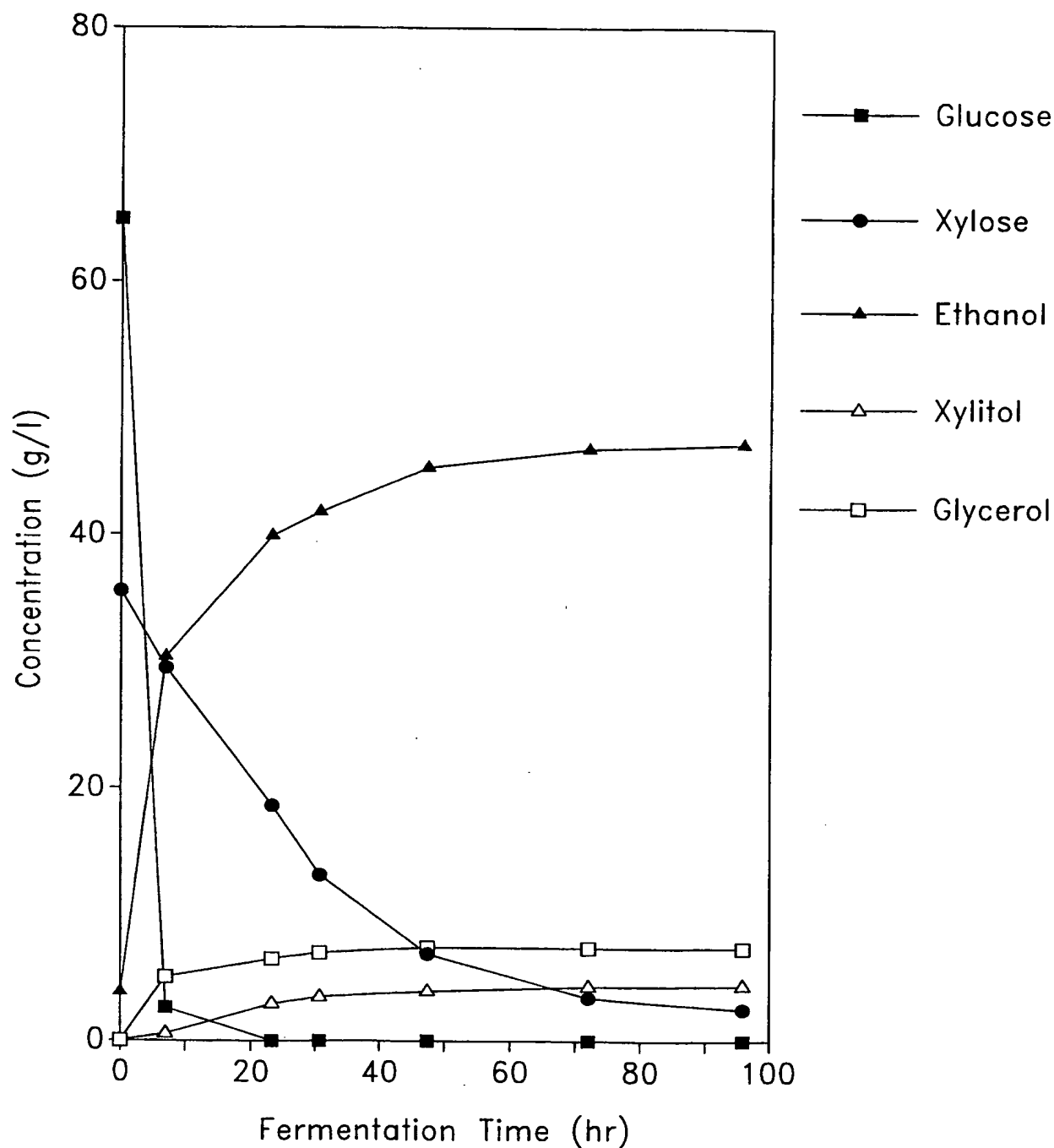
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Fermentation of Glucose and
Xylose by LNH32

Fig. 2

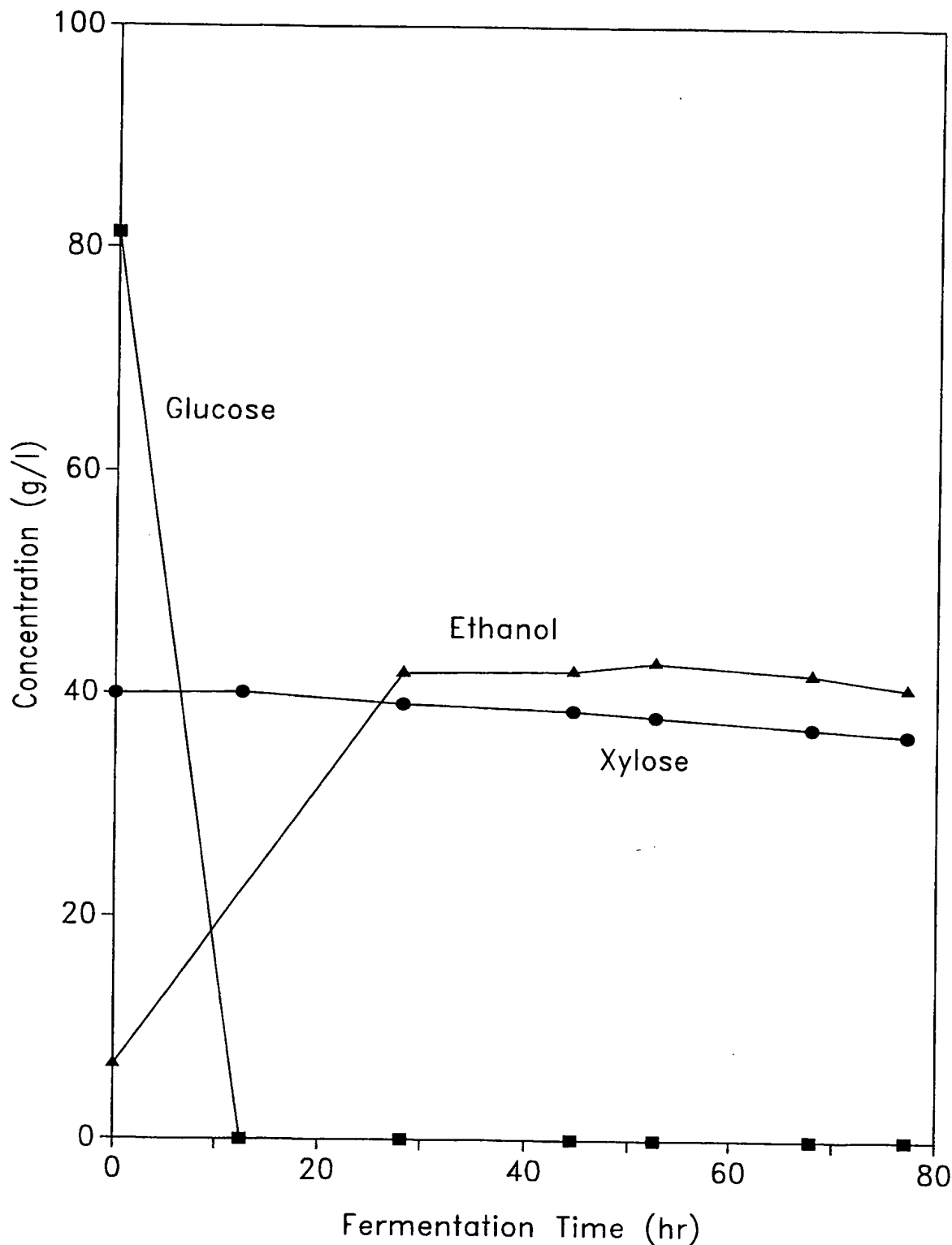
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Simultaneous Fermentation of Glucose and
Xylose by Recombinant *Saccharomyces* LNH33

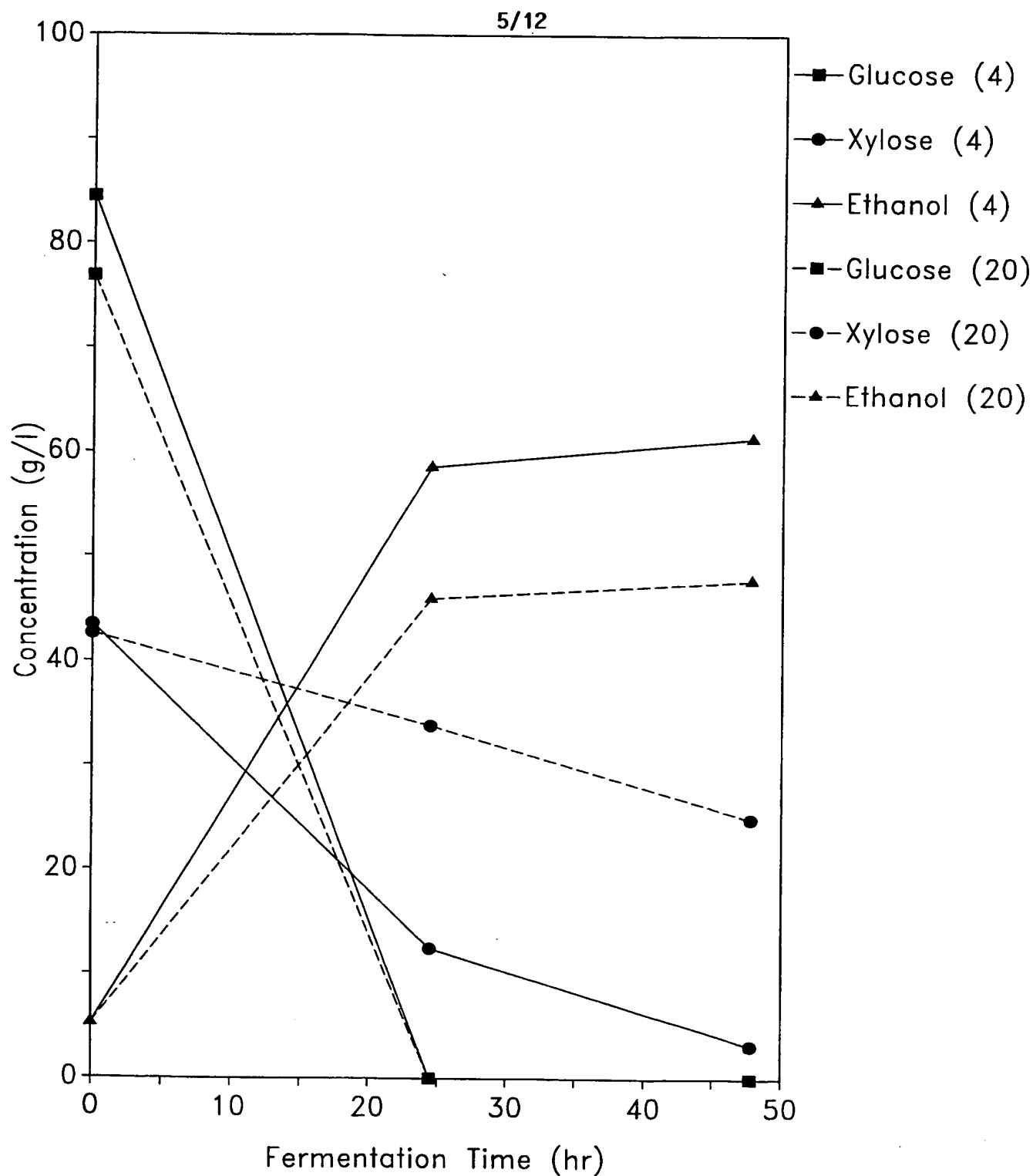
Fig. 3

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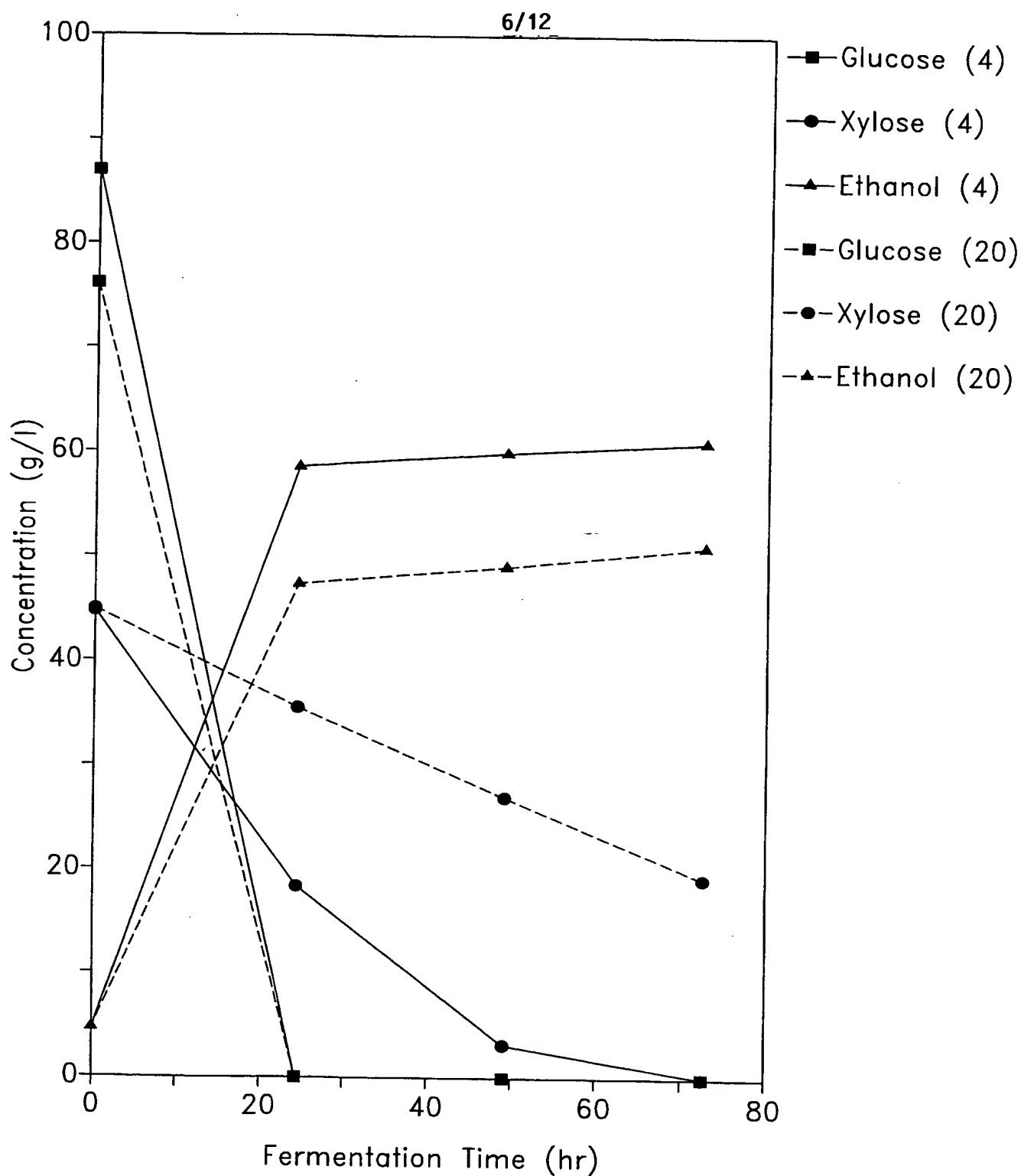
Fermentation of Glucose and Xylose by the
Un-Engineered Parent 1400 *Saccharomyces* Yeast

Fig. 4



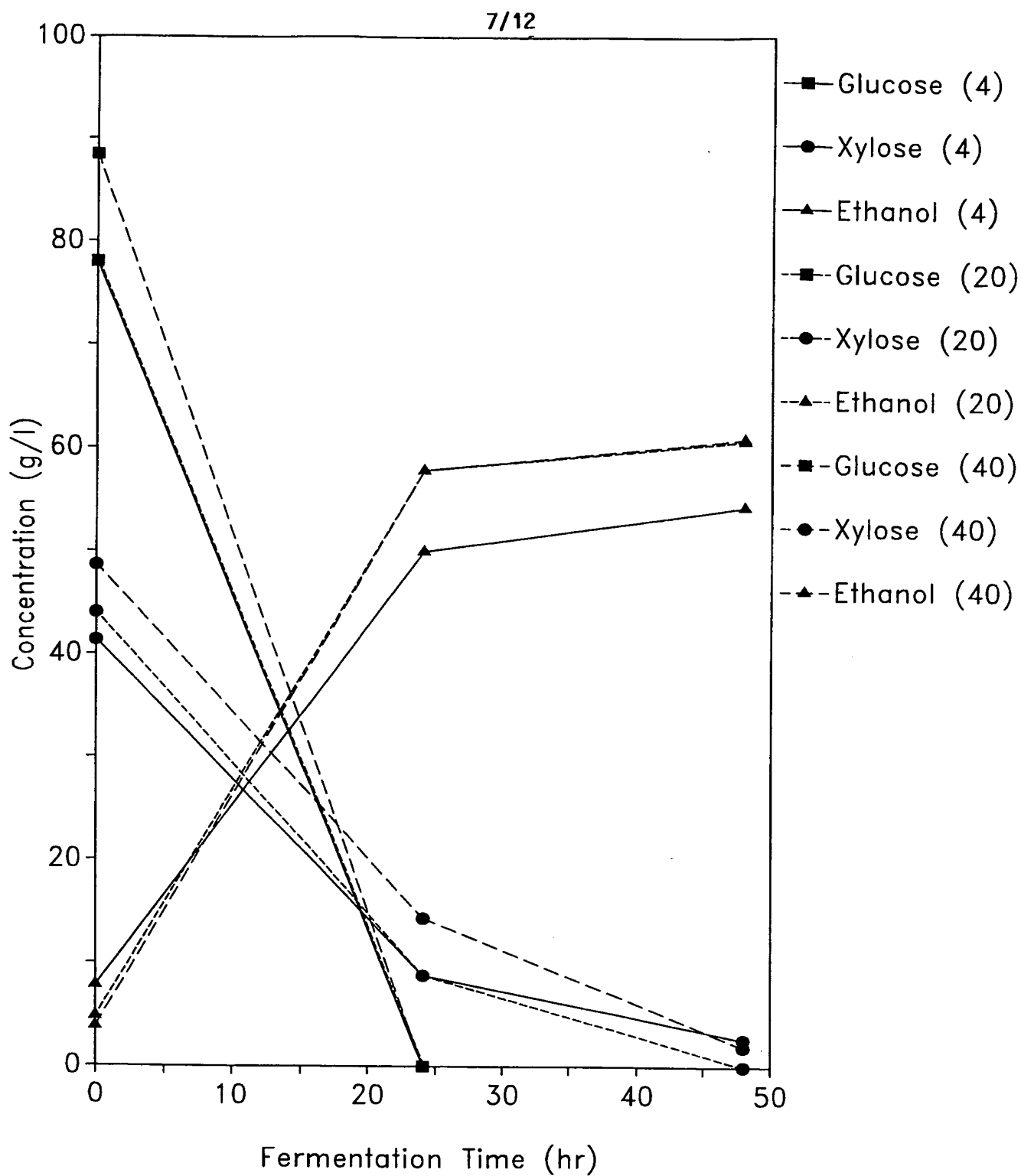
Fermentation of glucose and xylose by LNH32
after being cultured for 4 and 20
generations in non-selective (glucose) medium.

Fig. 5
SUBSTITUTE SHEET (RULE 20)



Fermentation of glucose and xylose by LNH33
after being cultured for 4 and 20
generations in non-selective (glucose) medium.

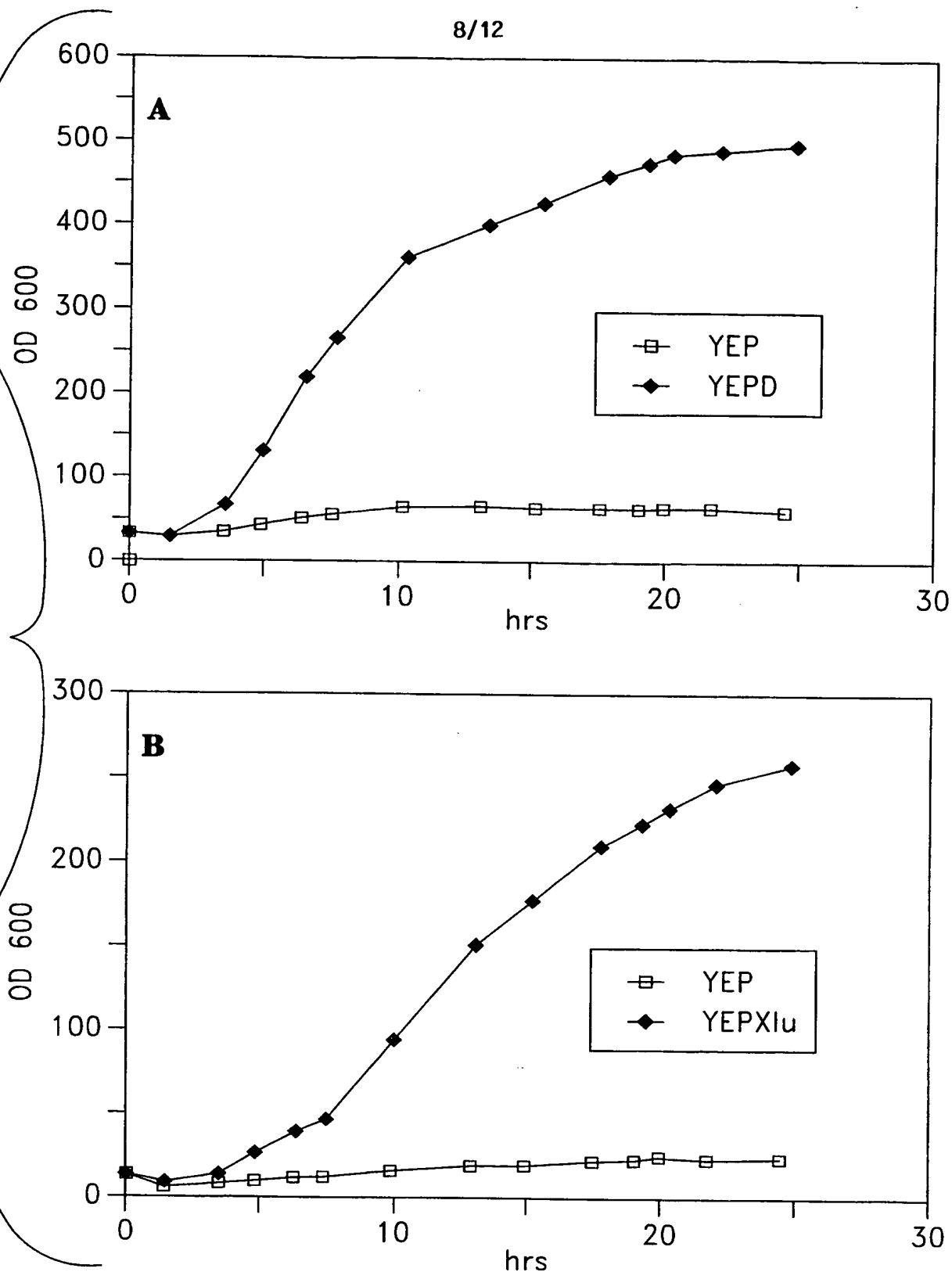
Fig. 6
SUBSTITUTE SHEET (RULE 26)



Fermentation of glucose and xylose by LNH-ST(1)
after being cultured for 4, 20, and 40
generations in non-selective (glucose) medium.

Fig. 7
SUBSTITUTE SHEET (RULE 28)

Fig. 8



- (A) Yeast (*S. cerevisiae*) AH22 cultured in YEPD (1% yeast extracts, 2% peptone, 2% glucose or YEP (1% yeast extracts, 2% peptone).
- (B) Yeast AH22 cultured in YEPXu (1% yeast extracts, 2% peptone, 2% xylulose) or YEP.

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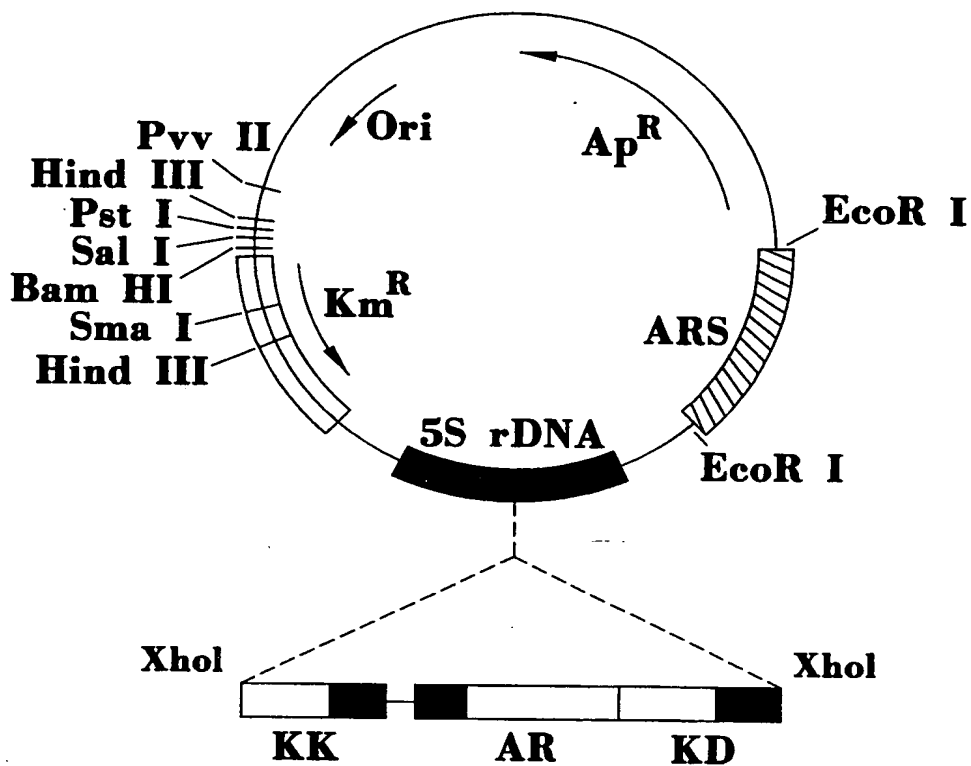


Fig. 9a

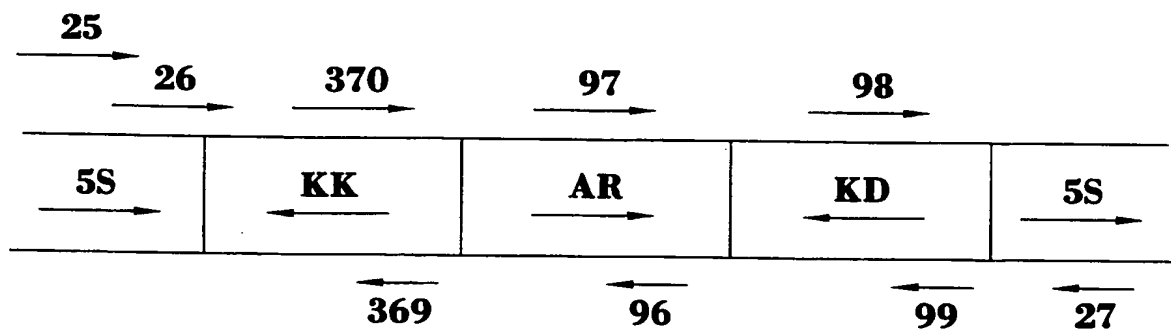
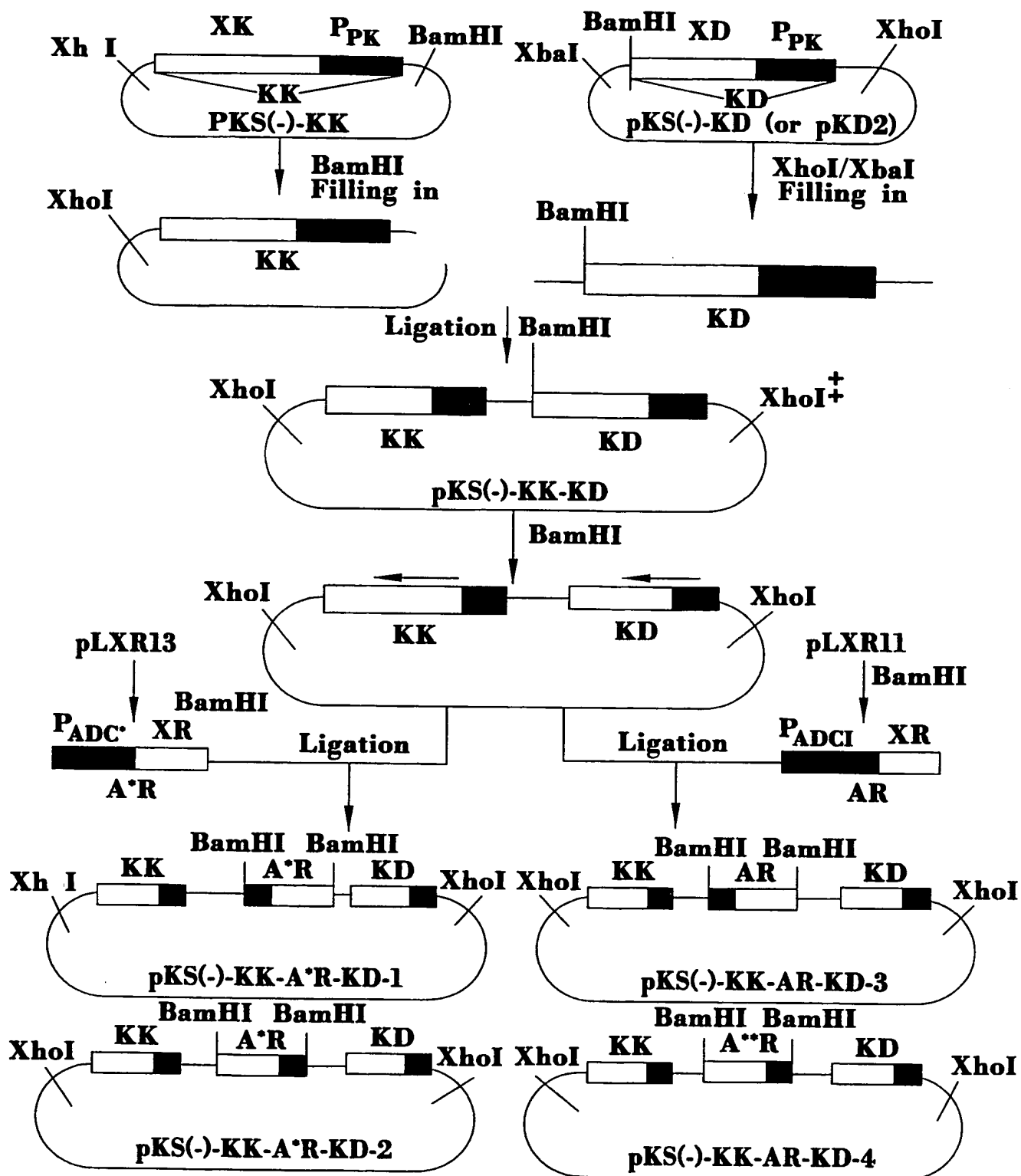


Fig. 9b

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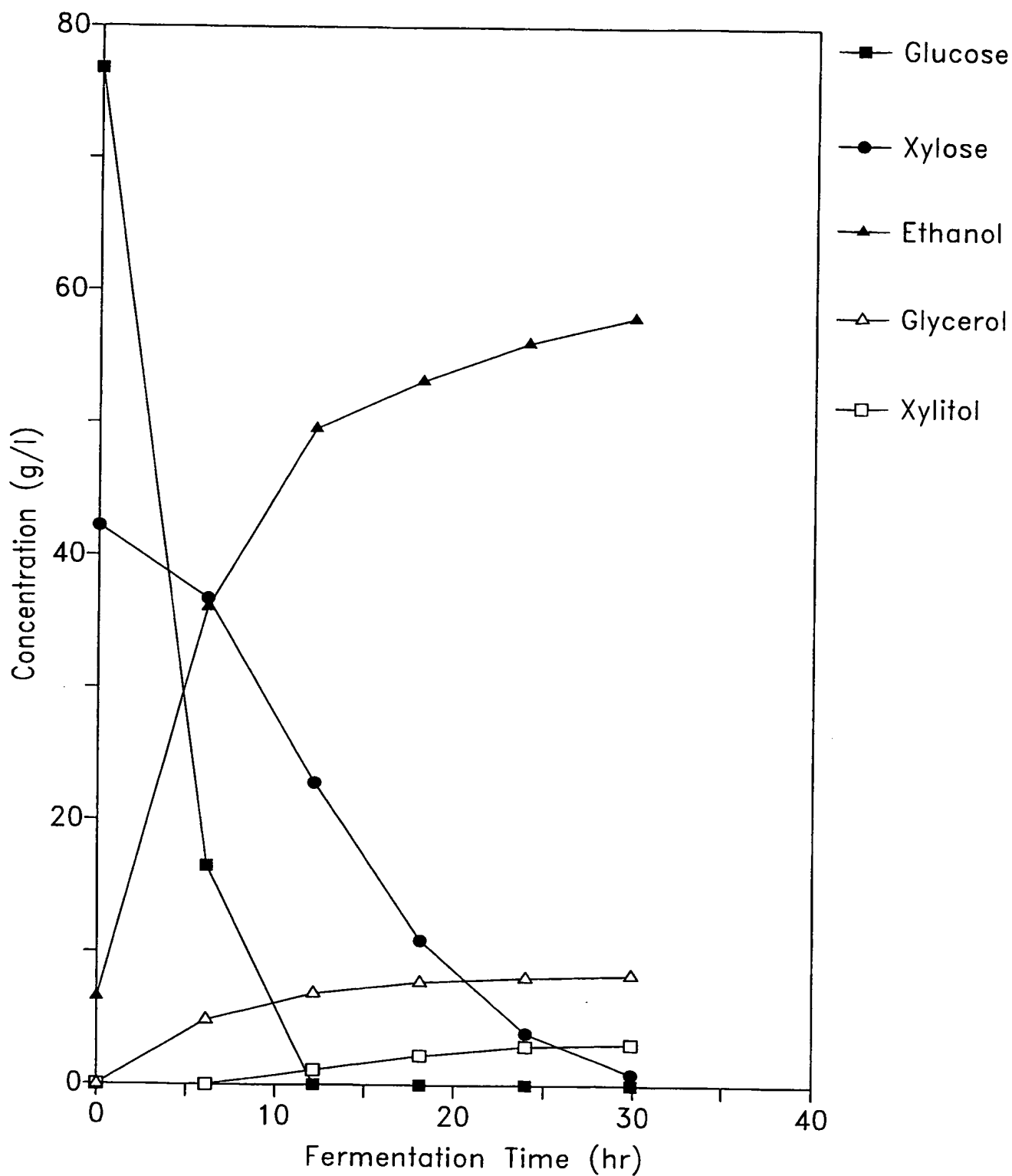
**Fig. 10**

Construction of pKS(-)-KK-AR-KD plasmids

† The XhoI site was regenerated after ligation; *Intact ADC1 promoter;
 ** ADC1 promoter with TRP5 ribosomal binding site

SUBSTITUTE SHEET (RULE 20)

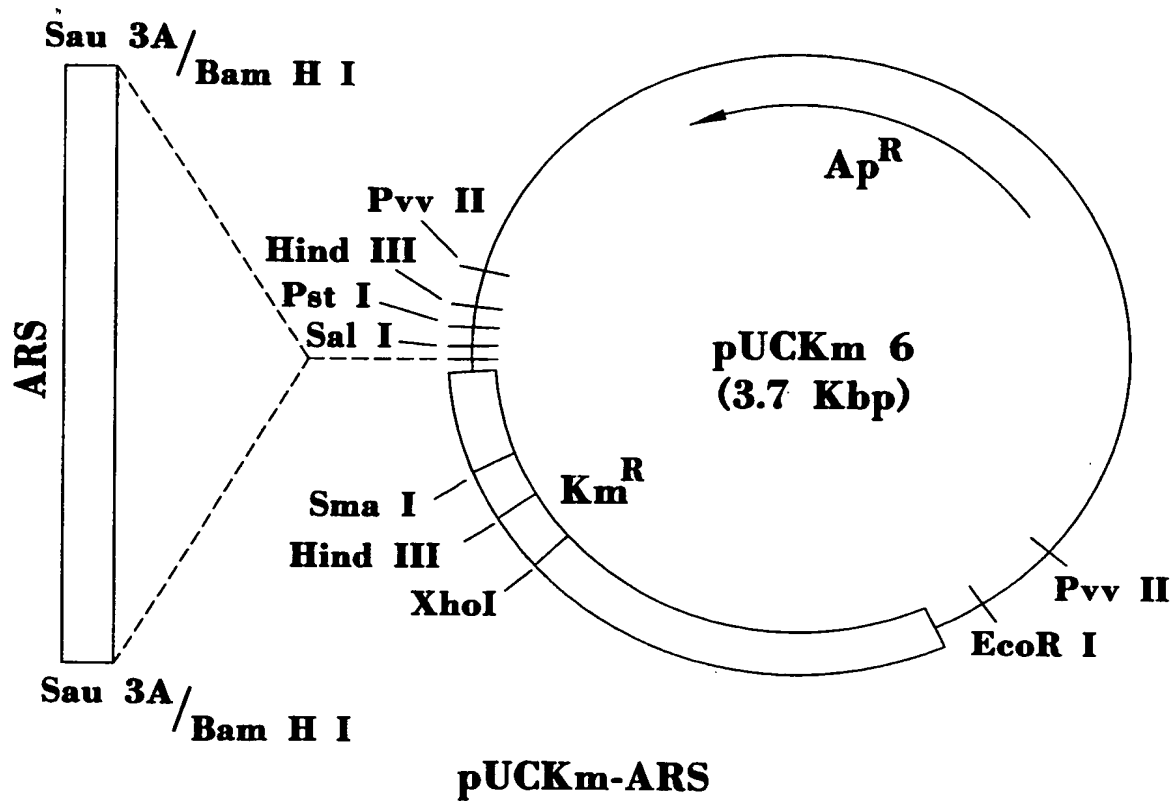
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Recombinant Saccharomyces 1400(LNH-ST)
for fermenting Glucose and Xylose

Fig. 11
SUBSTITUTE SHEET (RULE 28)

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**Fig. 12**